

KIC 006864132

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
006864132-01	OBS	No	609.224451	226.640573	728.3	5.215	7.2	7.4	6.91	5102	24.84	8.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864132-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

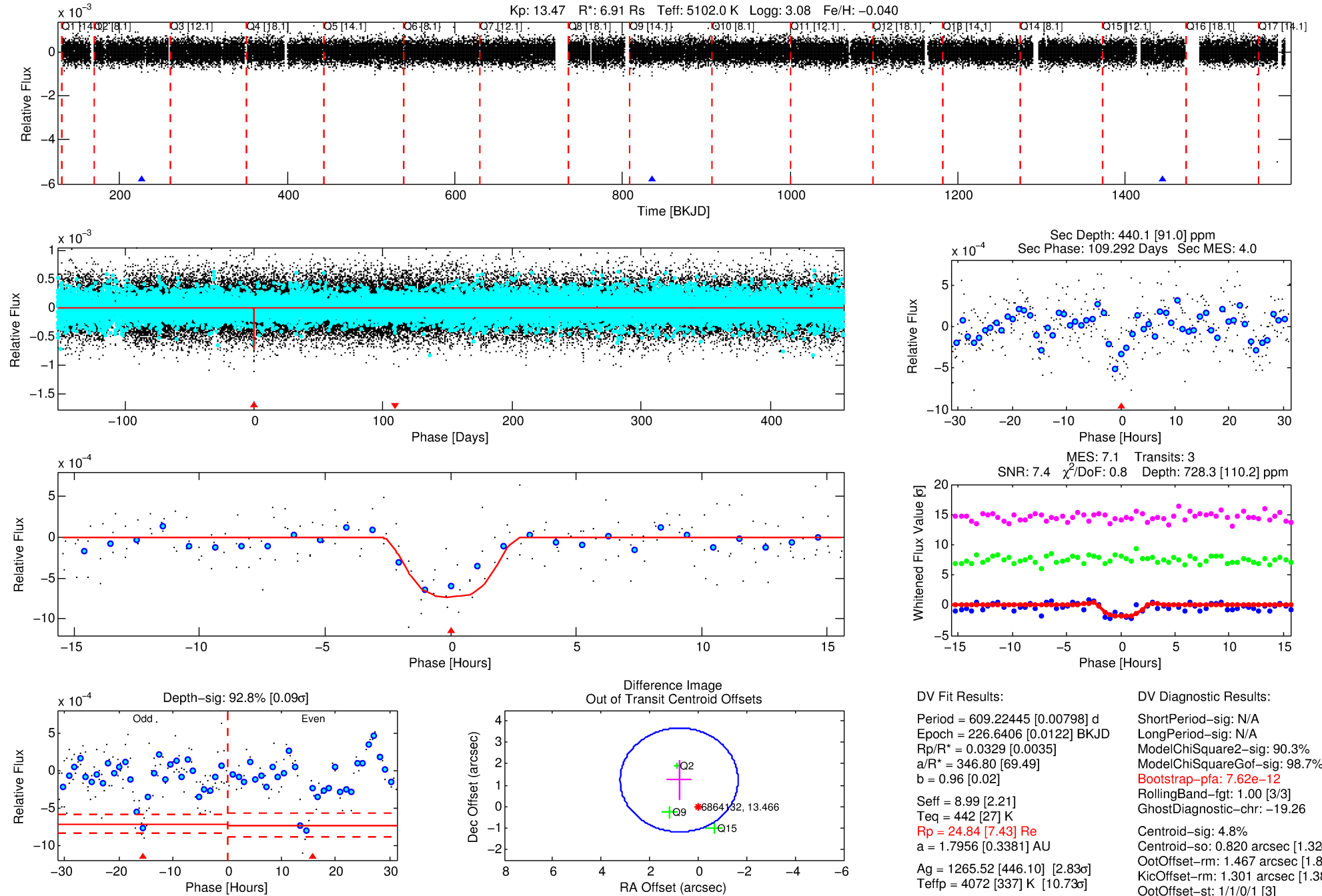
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006864132-01

No Significant Match Found

DV One-Page Summary

KIC: 6864132 Candidate: 1 of 1 Period: 609.224 d



DV Fit Results:

Period = 609.22445 [0.00798] d
Epoch = 226.6406 [0.0122] BKJD
Rp/R* = 0.0329 [0.0035]
a/R* = 346.80 [69.49]
b = 0.96 [0.02]
Seff = 8.99 [2.21]
Teq = 442 [27] K
Rp = 24.84 [7.43] Re
a = 1.7956 [0.3381] AU
Ag = 1265.52 [446.10] [2.83σ]
Teffp = 4072 [337] K [10.73σ]

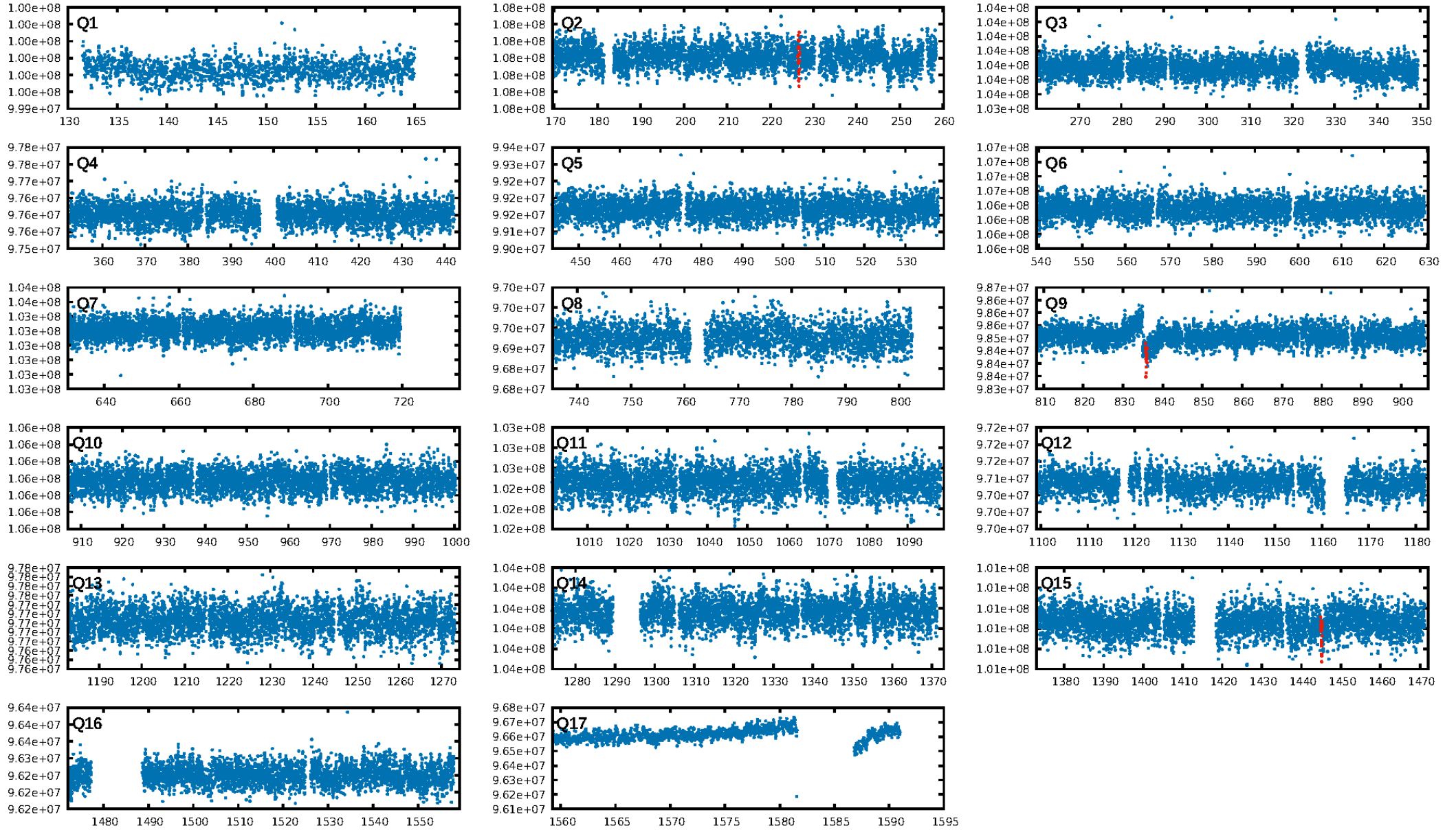
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.3%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 7.62e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -19.26
Centroid-sig: 4.8%
Centroid-so: 0.820 arcsec [1.32σ]
OotOffset-rm: 1.467 arcsec [1.81σ]
KicOffset-rm: 1.301 arcsec [1.38σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

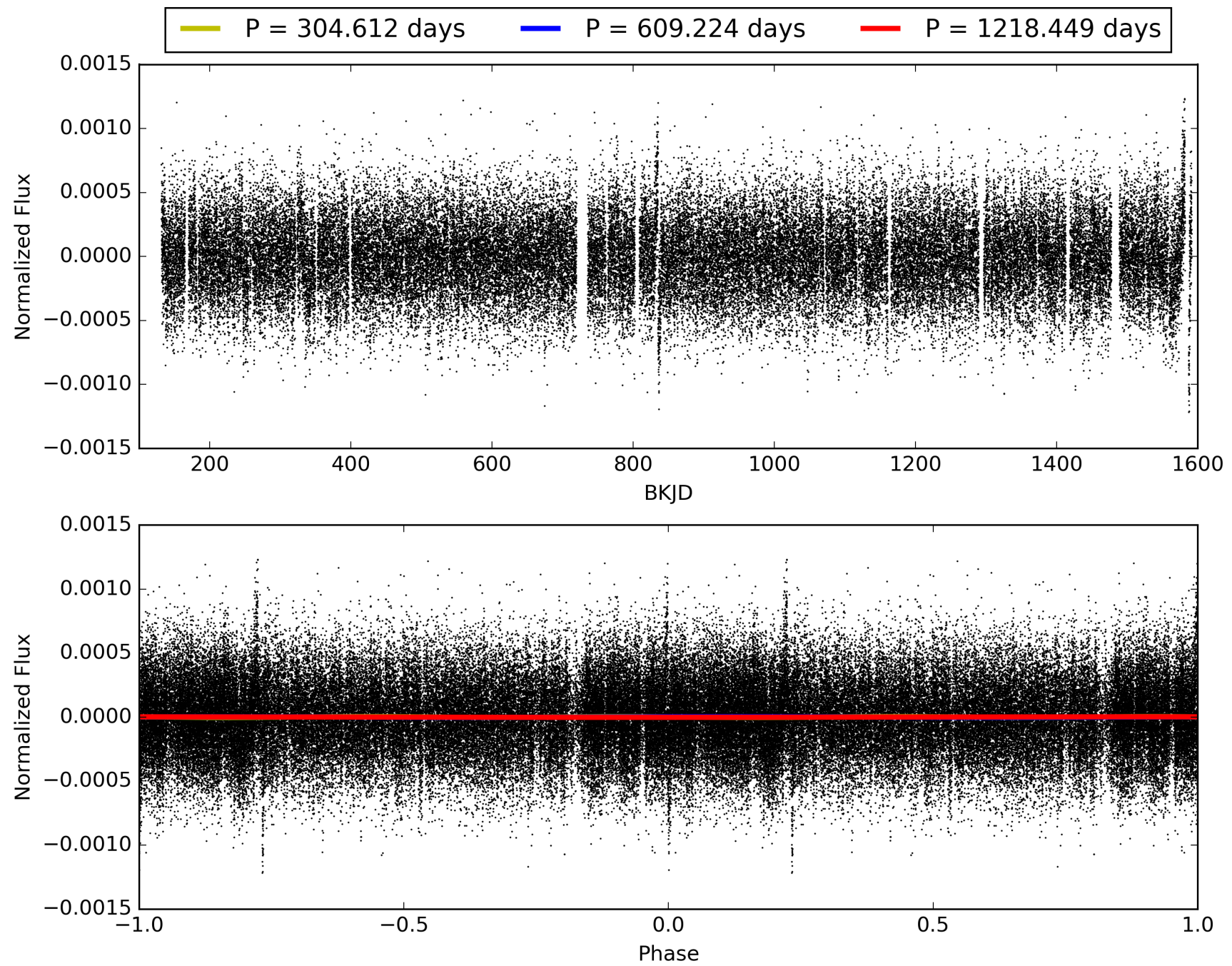
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:13:33 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006864132-01, PDC Light Curves

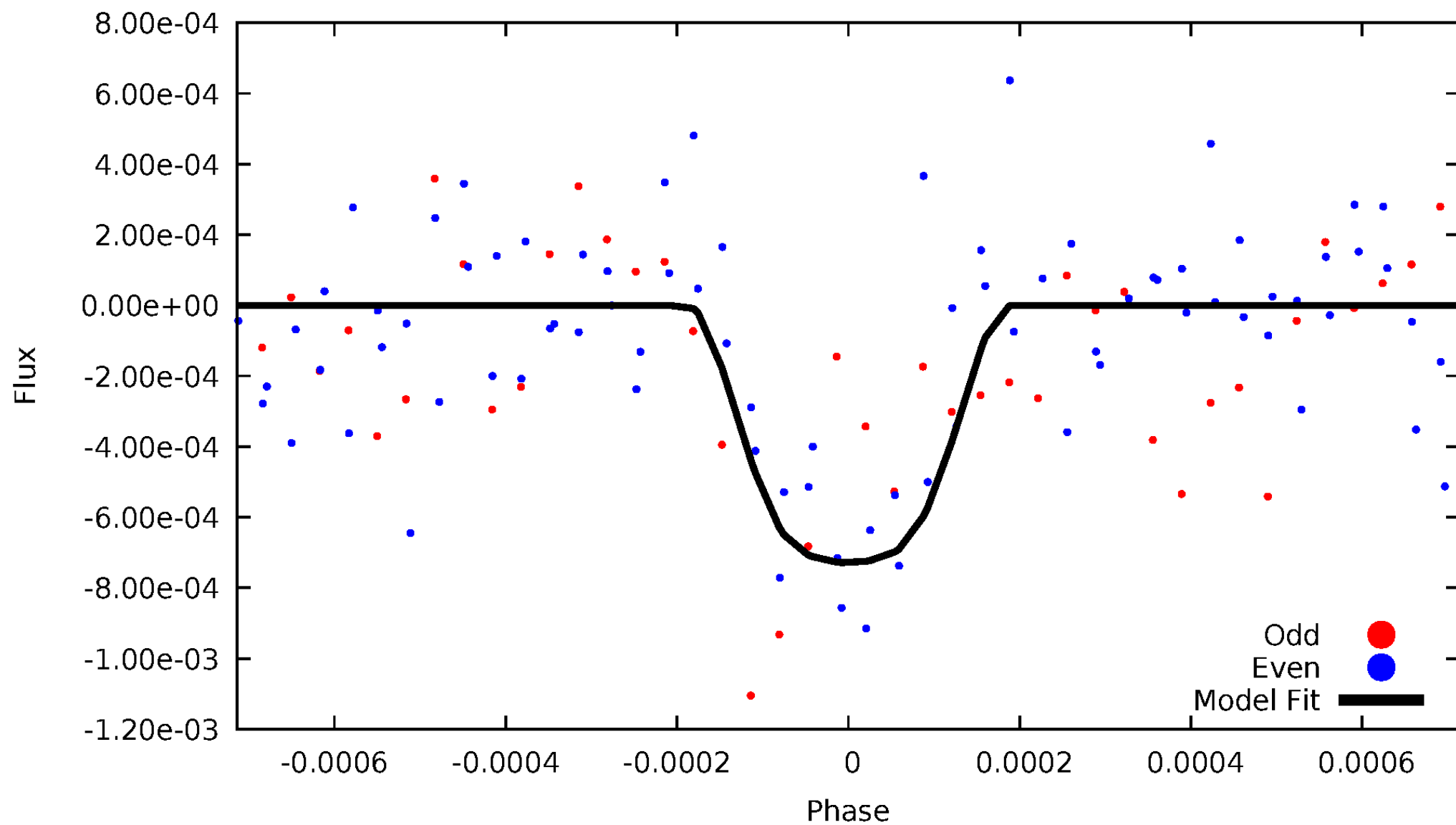


TCE 006864132-01



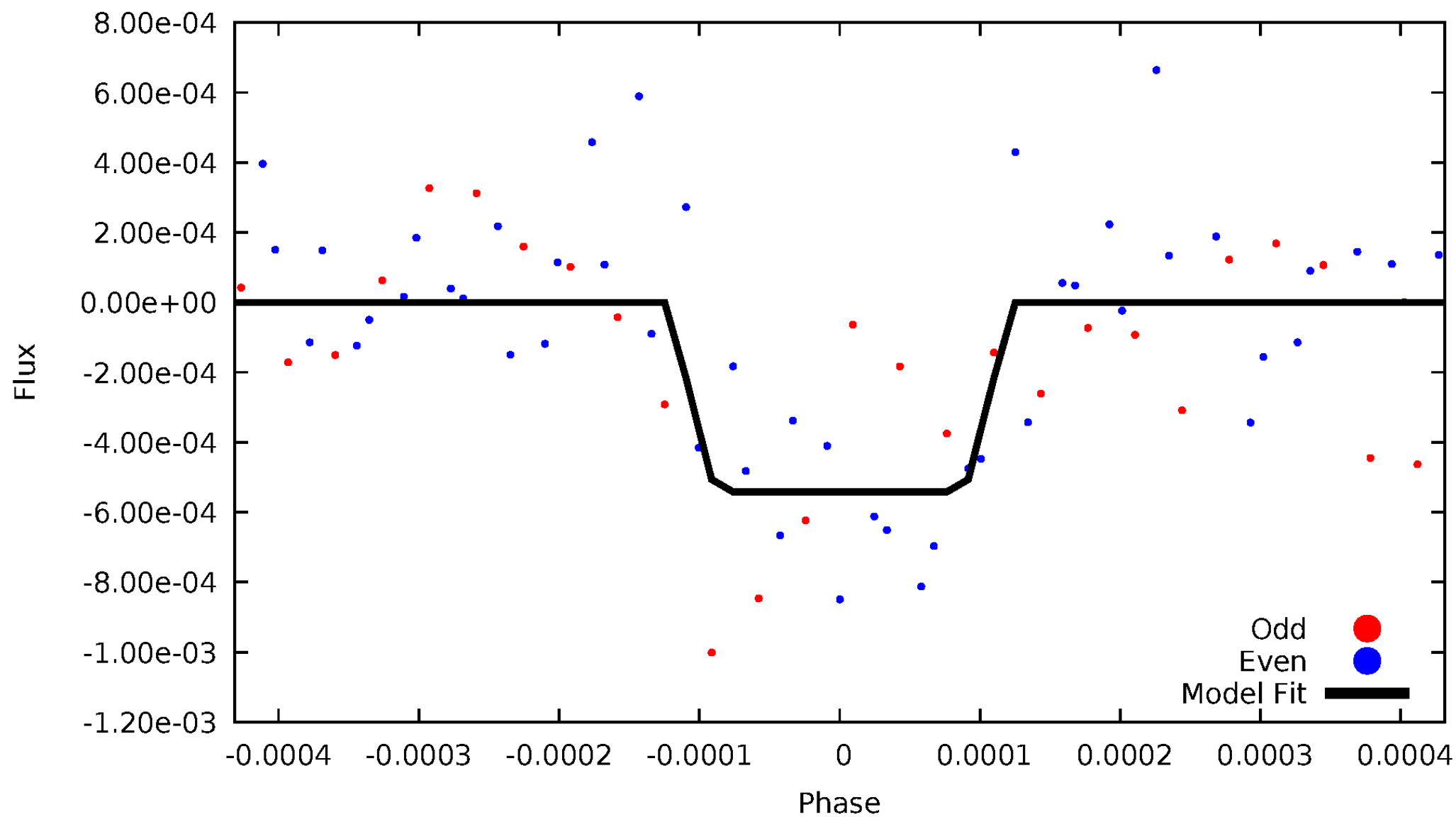
DV Odd/Even

TCE 006864132-01



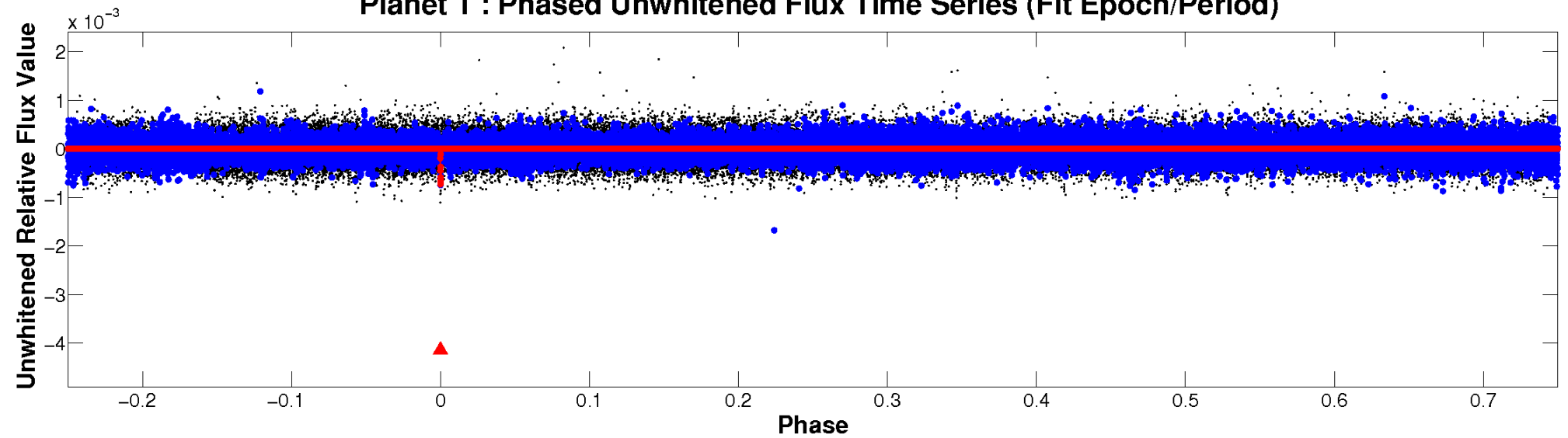
ALT Odd/Even

TCE 006864132-01

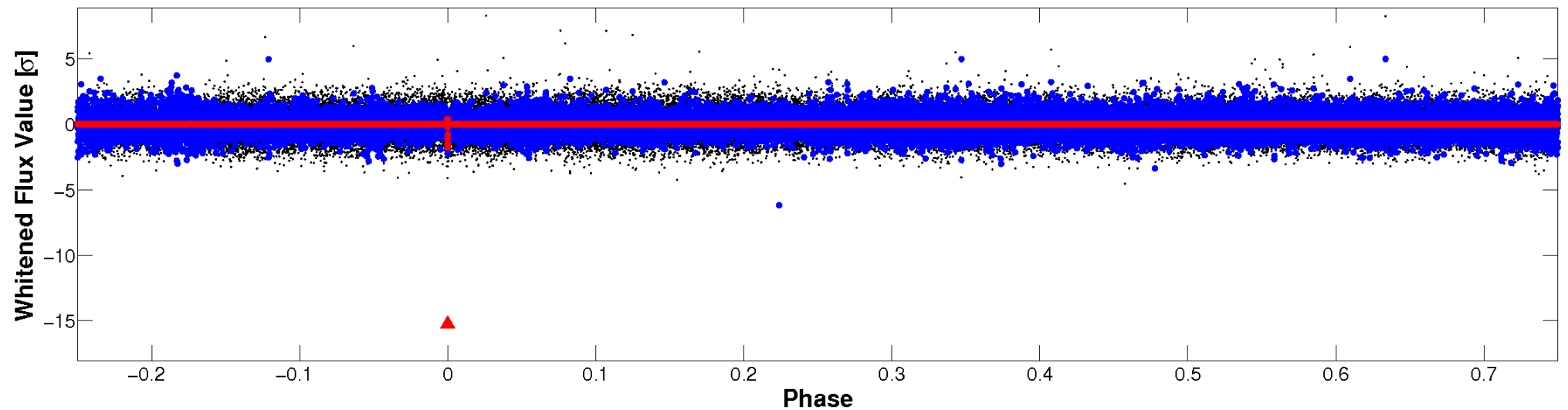


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

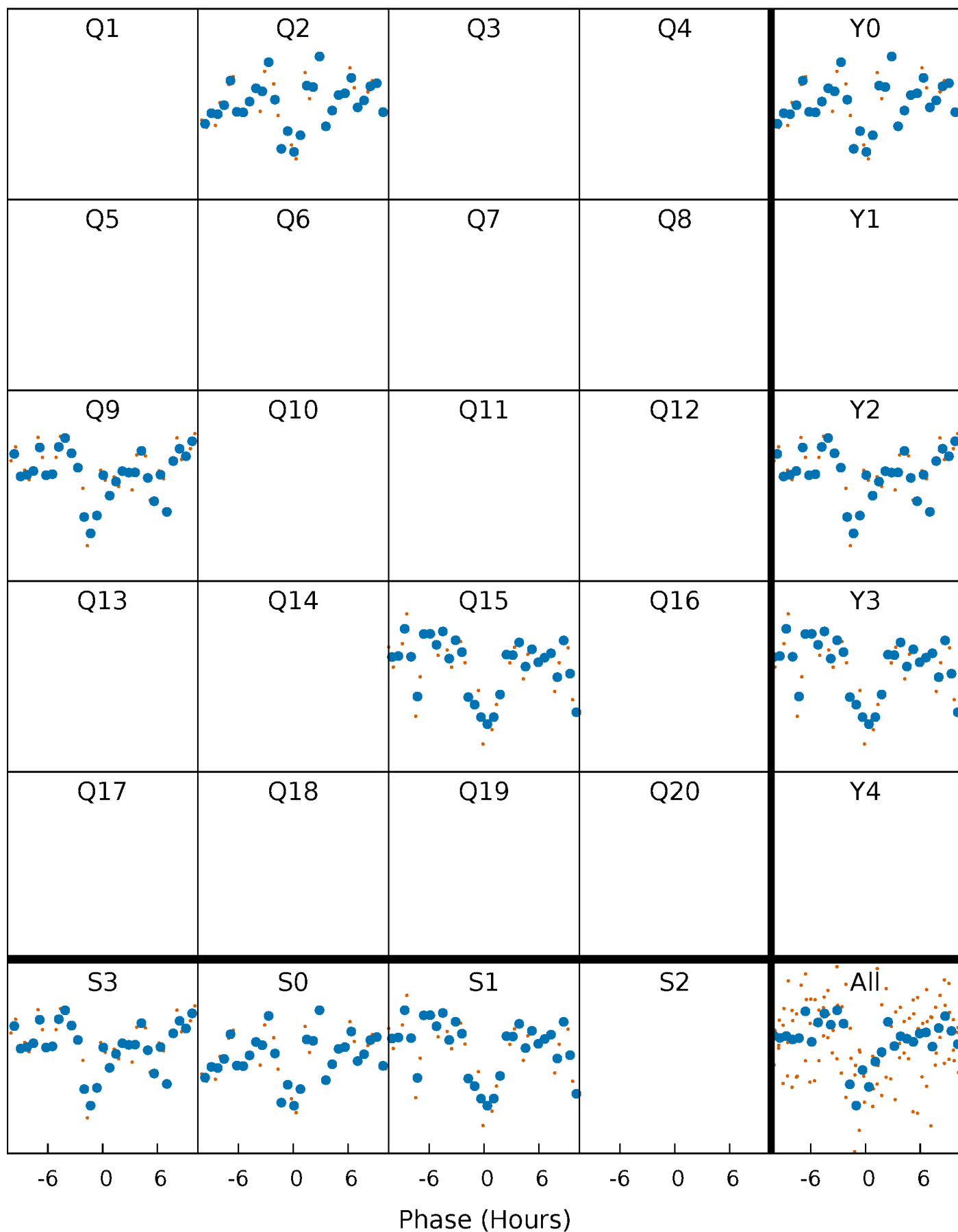


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



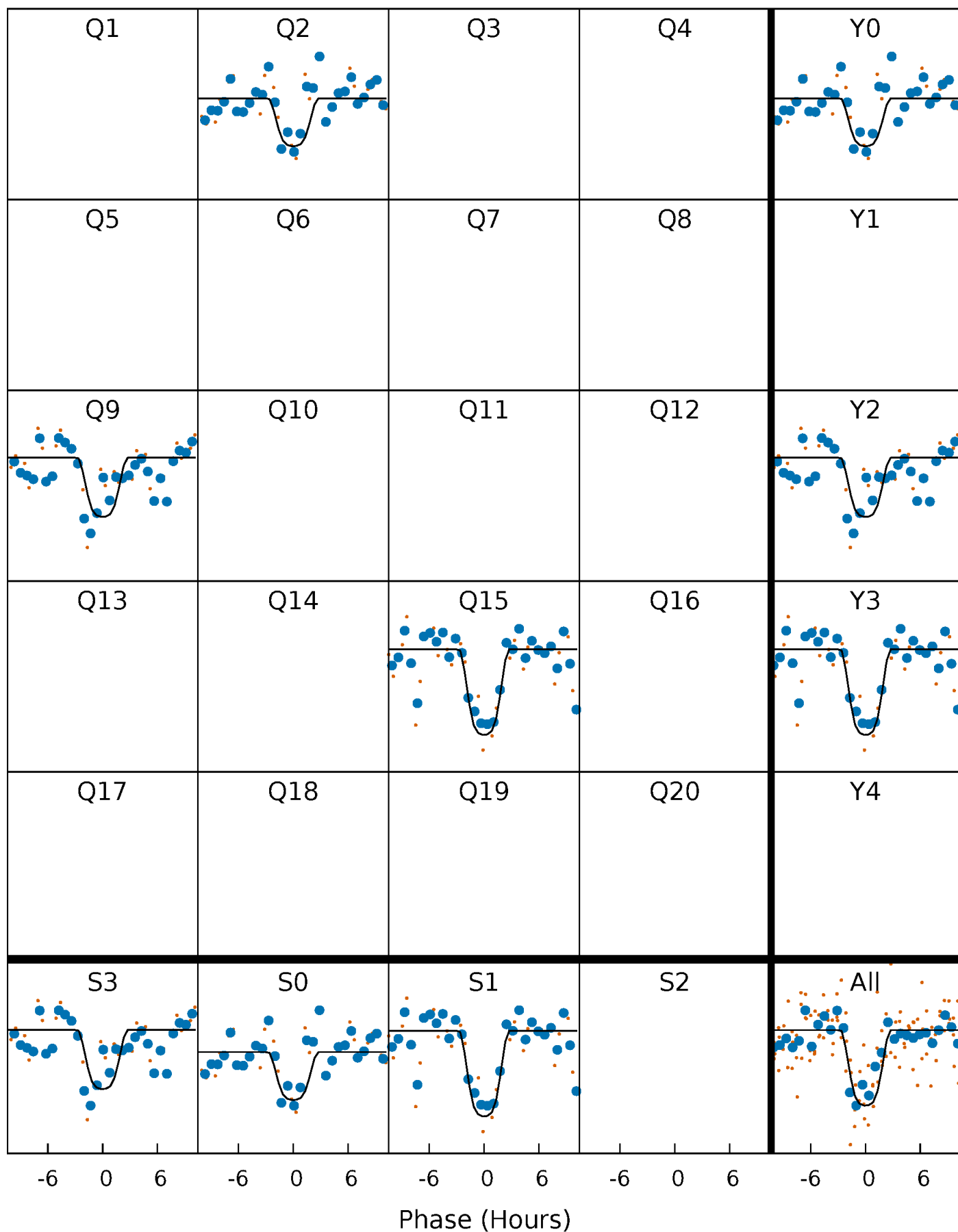
PDC Quarter-Phased Transit Curves

TCE 006864132-01 P=609.224451 Days $T_0=226.640573$ (BKJD)



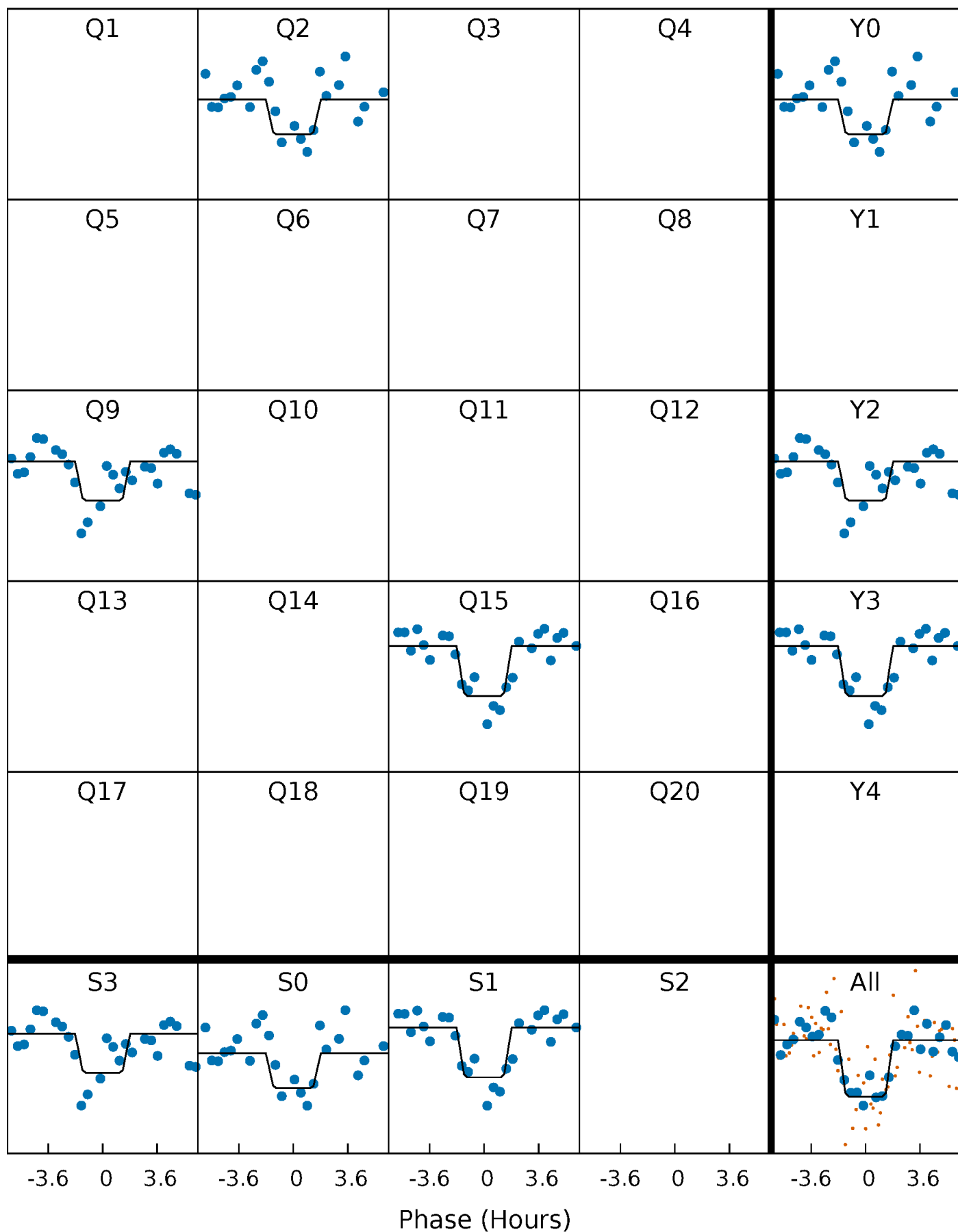
DV Quarter-Phased Transit Curves

TCE 006864132-01 P=609.224451 Days $T_0=226.640573$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

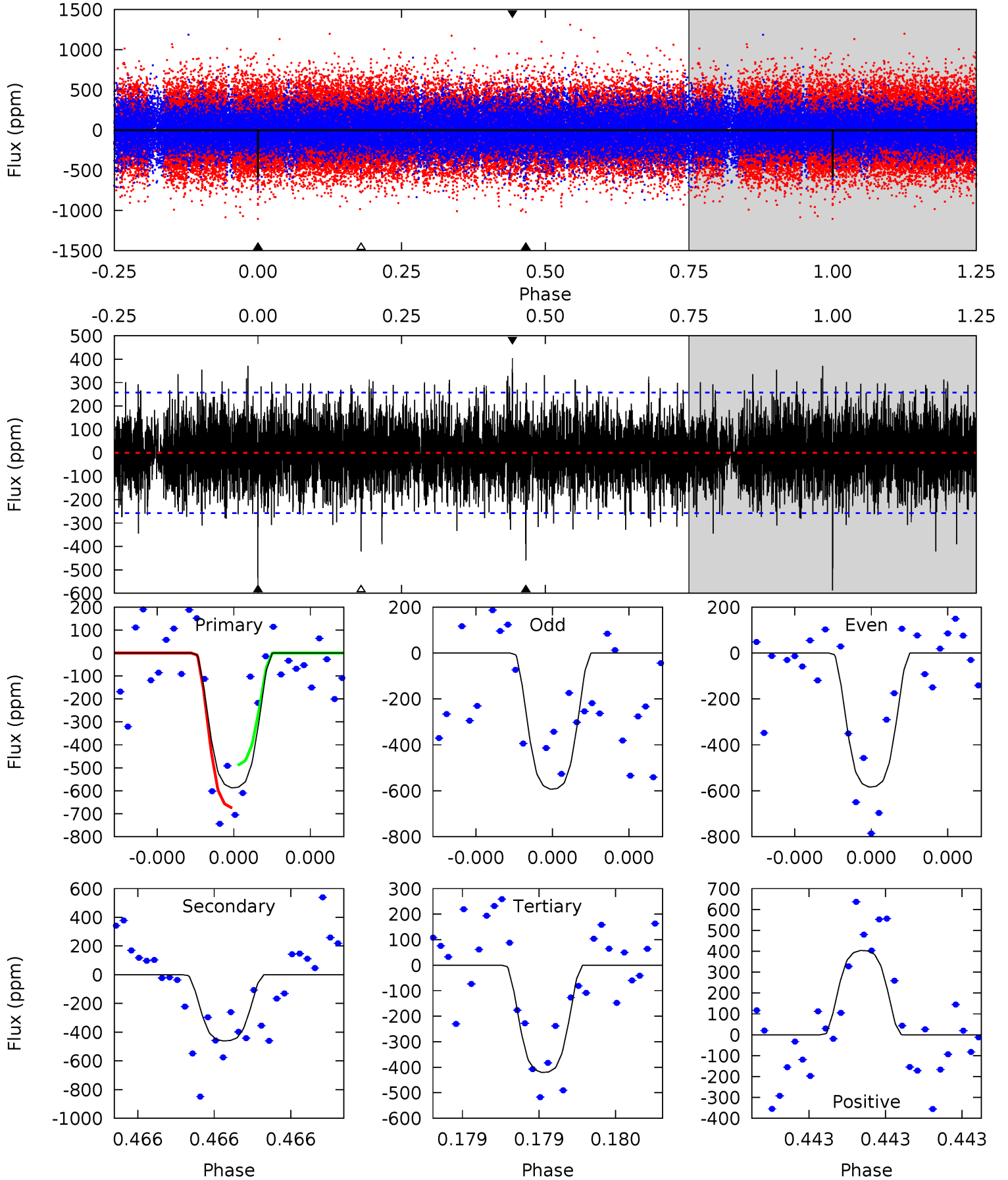
TCE 006864132-01 P=609.233403 Days $T_0=226.617776$ (BKJD)



DV Model-Shift Uniqueness Test

006864132-01, P = 609.224451 Days, E = 226.640573 Days

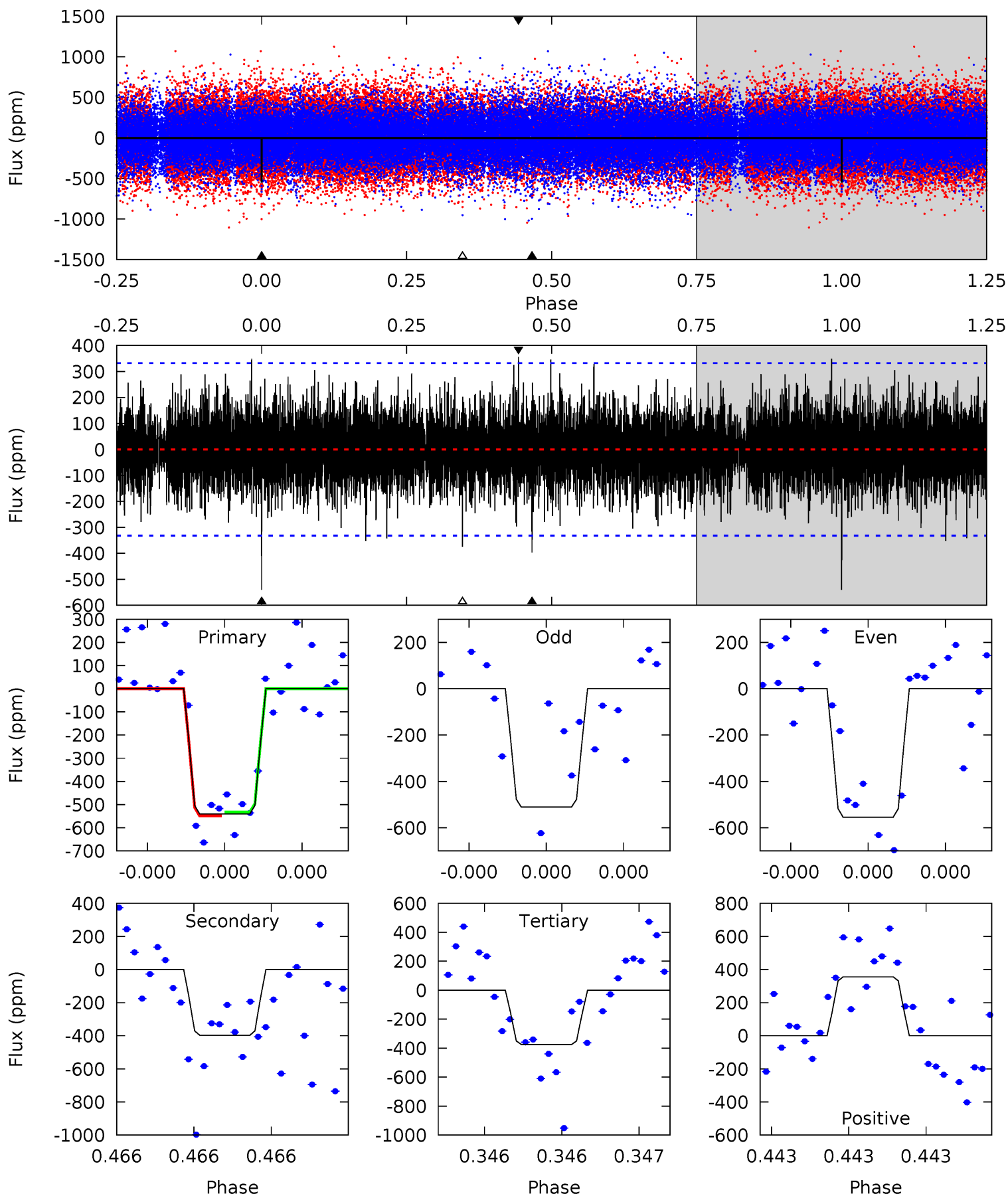
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	10.1	9.17	8.81	5.62	3.56	2.21	3.64	4.00	0.88	1.24	0.10	0.99	0.41	2.03



Alt Model-Shift Uniqueness Test

006864132-01, P = 609.233403 Days, E = 226.617776 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.27	6.82	6.44	6.10	5.70	3.68	1.57	2.83	3.17	0.38	0.72	0.35	1.06	0.40	0.14



Stellar Parameters For KIC 006864132

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5102^{+74}_{-193}	$3.077^{+0.033}_{-0.027}$	$-0.040^{+0.150}_{-0.350}$	$6.910^{+0.322}_{-1.934}$	$2.077^{+0.104}_{-0.940}$	$0.009^{+0.004}_{-0.001}$
	+1%/-4%	+1%/-1%	+375%/-875%	+5%/-28%	+5%/-45%	+42%/-6%
Source	PHO1	AST9	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006864132-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-461 ± 46	$25.02^{+2.88}_{-3.15}$	614^{+15}_{-21}	4258^{+241}_{-204}	1319^{+403}_{-283}
Alt.	-397 ± 58	$17.58^{+2.91}_{-2.82}$	616^{+14}_{-24}	4742^{+390}_{-342}	2283^{+1007}_{-691}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

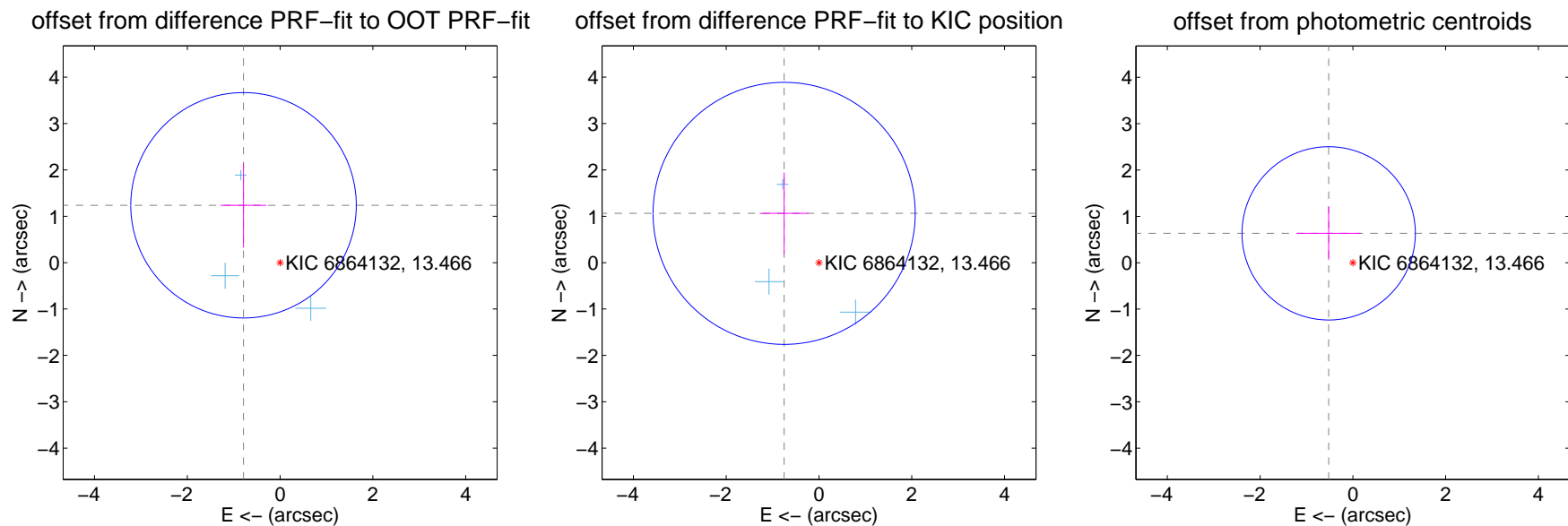
DV Centroid Data

Supplemental centroid analysis for 006864132-01. Kepler magnitude: 13.47. Transit SNR 7.37

There are 3 quarters with good PRF difference image offsets

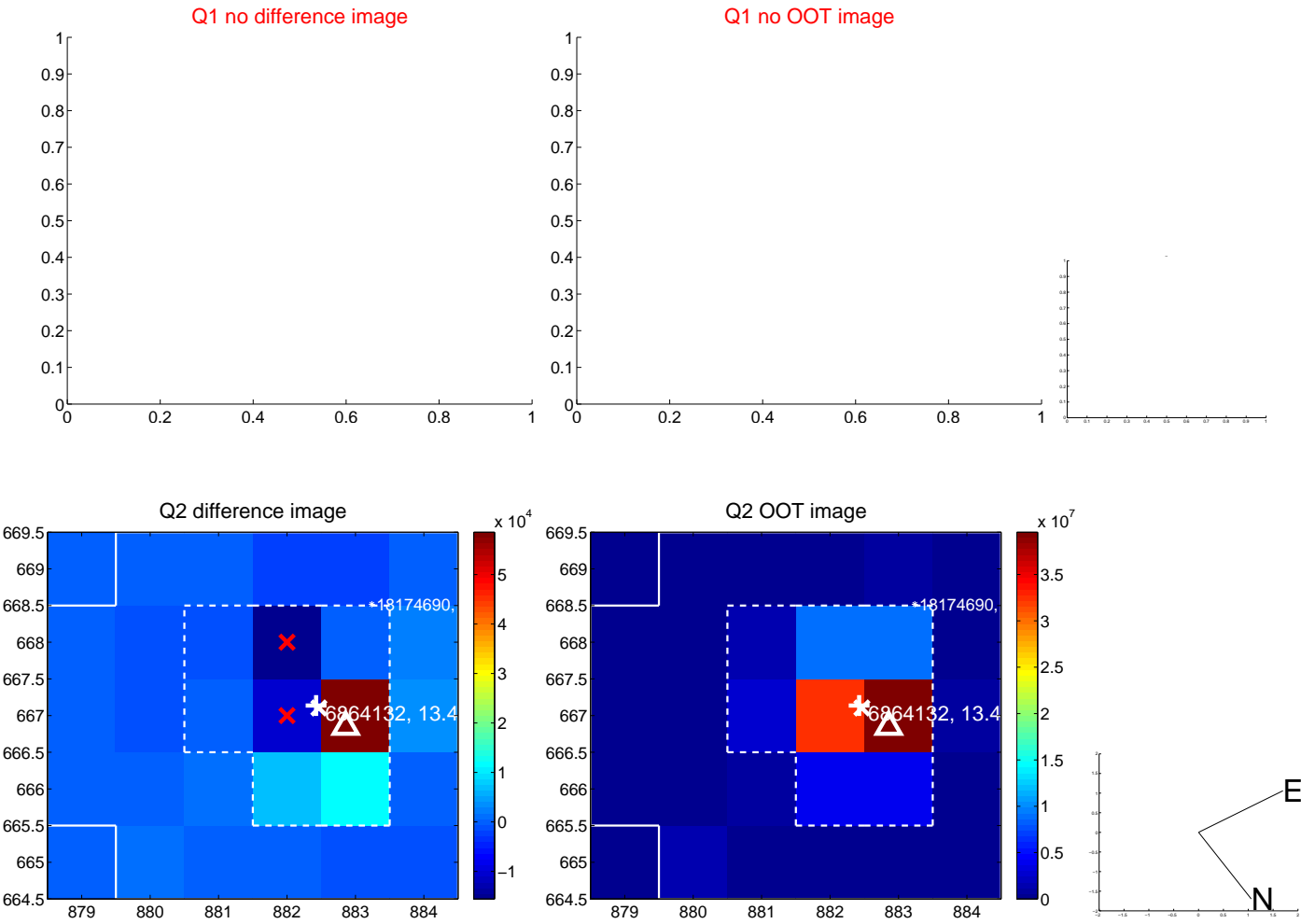
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.467 ± 0.810	1.81	0.788 ± 0.495	1.237 ± 0.907
PRF-fit source offset from KIC position	1.301 ± 0.942	1.38	0.751 ± 0.523	1.063 ± 0.882
photometric centroid source offset	0.82 ± 0.62	1.32	0.52 ± 0.69	0.63 ± 0.58



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

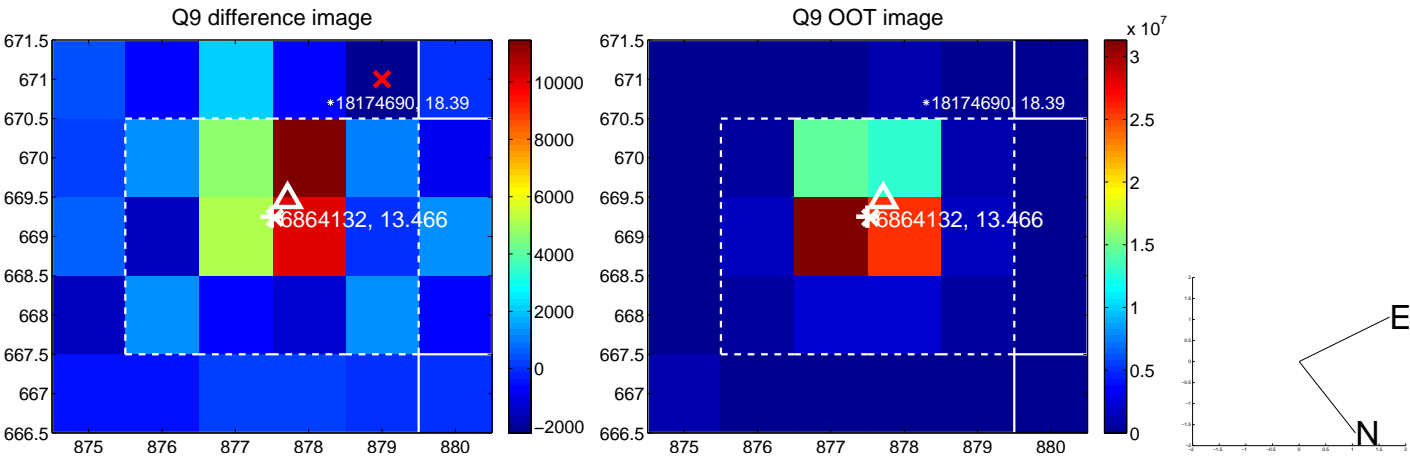
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q13 no difference image



Q13 no OOT image



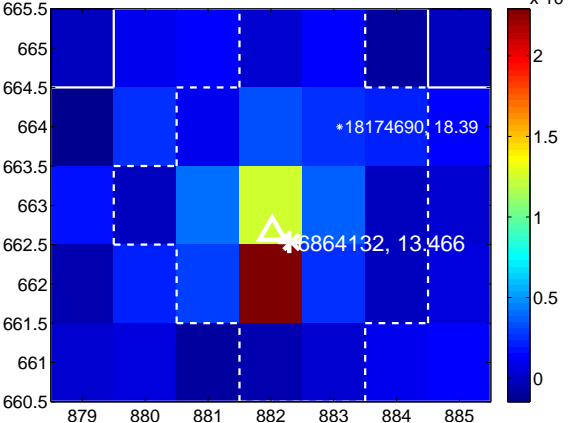
Q14 no difference image



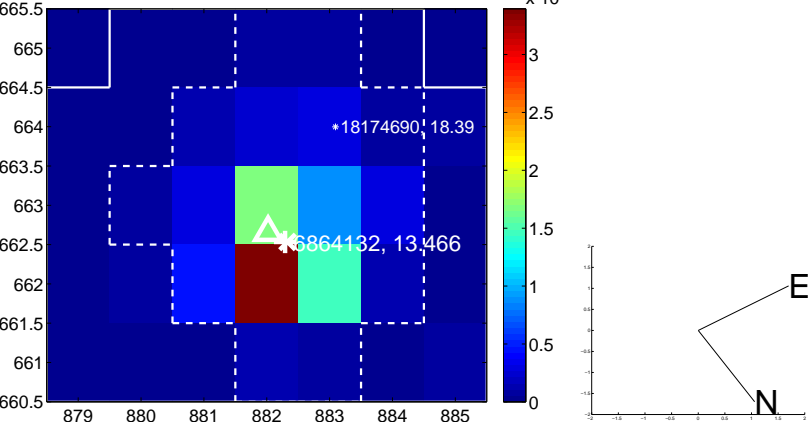
Q14 no OOT image



Q15 difference image



Q15 OOT image



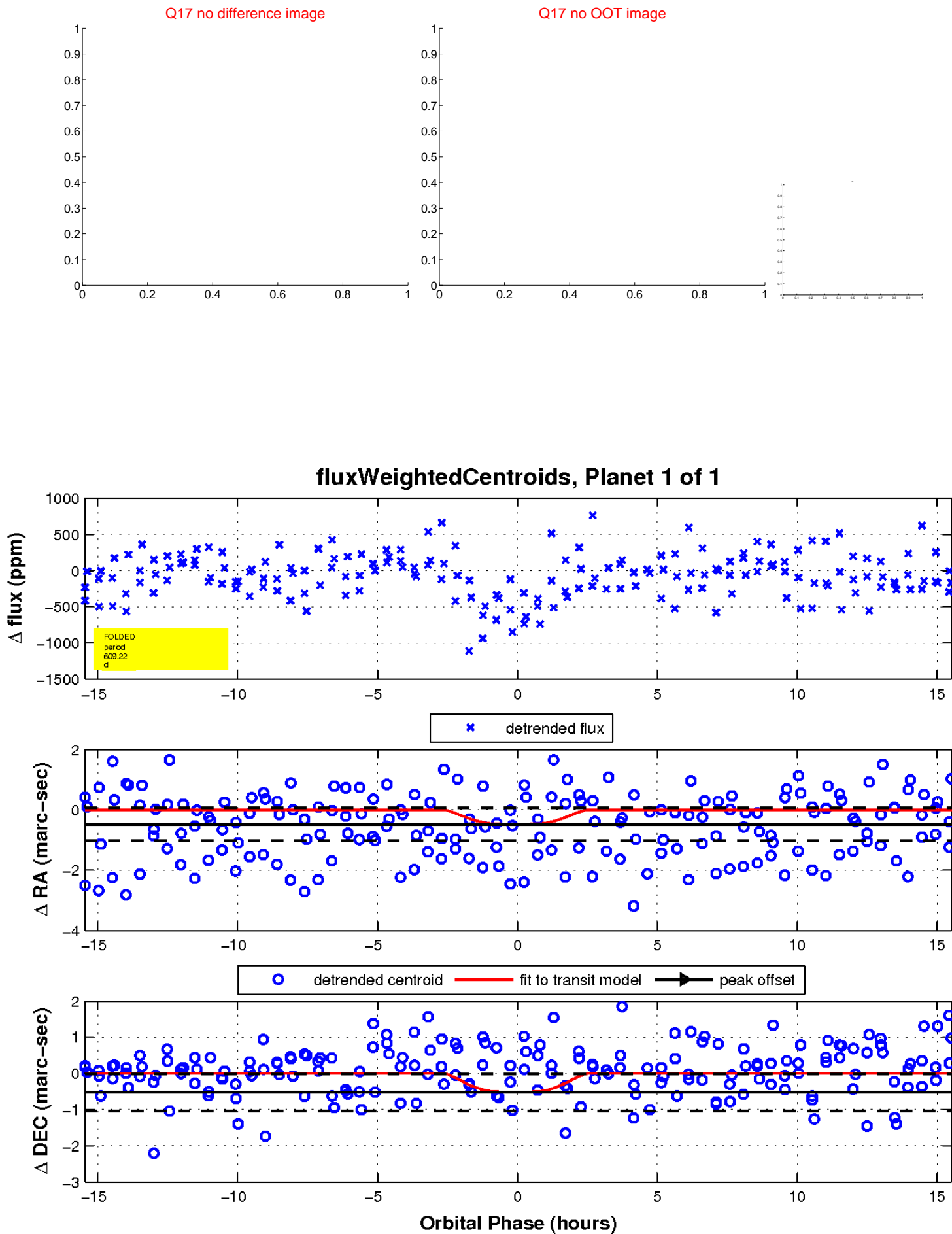
Q16 no difference image



Q16 no OOT image



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

